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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,448	04/04/2006	Guofu Zhou	NL 031175	9649
24737 7590 04/28/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
LAM, VINH TANG				
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
04/28/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,448

Applicant(s)

ZHOU ET AL.

Examiner

VINH T. LAM

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 4-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 of **Patent No. 7359108**. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Instant Application 10/57448	Patent No. 7359108
1. A display device having at least one picture element having an optical switch comprising at least one first fluid and a second fluid immiscible with each other above a first support plate, the second fluid being electro-conductive or polar which display device has driving means for applying to electrodes of the optical switch voltages associated with a range of electro-optical states of the picture element between and including a first extreme state and a second extreme state said driving means providing during selection of a picture element variable	1. A display device having a viewing side and comprising: picture elements having at least one first fluid and a second fluid immiscible with each other within a space between a first transparent support plate facing the viewing side and a second support plate, the second fluid being electroconductive or polar, an intermediate substrate between the first support plate and the second

voltages to said picture element.	support plate, the intermediate substrate having a reflective surface at the side of the first support plate and being provided with at least one passage between spaces at both sides of the intermediate substrate, and an electrode arranged on the second support plate for introducing flow of the first fluid through said passage.
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The Instant Application, Patent No. **7359108** teach all of the claim limitations except "an optical switch" and "driving means" . However, it would have been obvious to a person having ordinary skill in the art to recognize that Patent No. **7359108** first and second fluids can be alternated positions to vary light as an optical switch and they must be driven and selected by some driving means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Loxley et al. (US Patent No. 6262833)** in view of **Sterling et al. (US Pub. No. 2004/0231987)** and further in view of **Zimmermann (US Patent No. 4187160)**.

Regarding Claim 1, (Currently amended) **Loxley et al.** teach a display device having at least one picture element having an optical switch comprising at least one first fluid (Col. 2, Ln. 54) and a second fluid (Col. 2, Ln. 54-55) immiscible with each other above a first support plate (Col. 2, Ln. 38-40, Ln. 50-54), the display device has driving means for applying to electrodes of the optical switch voltages associated with a range of electro-optical states of the picture element (Col. 1, Ln. 58-62) between and including a first extreme state and a second extreme state (Col. 1, Ln. 66-67, Col. 2, Ln. 1-4, FIG. 1).

However, **Loxley et al.** do not teach that the second fluid being electro-conductive or polar.

In the same field of endeavor, **Sterling et al.** teach the second fluid being electro-conductive or polar (i.e. 118a, [0075], FIG. 16B).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Loxley et al.** teaching of a display comprising the first and the second fluid with **Sterling et al.** teaching of the second fluid being electro-conductive or polar in order to benefit of reducing the cost and parts (i.e. polar particles)

and simplifying the design and/or manufacturing process by having a display comprising the first and the second fluid which is electro-conductive or polar.

However, **Loxley et al.** and **Sterling et al.** do not teach that said driving means providing during selection of a picture element variable voltages to said picture element prior to applying a fixed voltage to the display device.

In the same field of endeavor, **Zimmermann** teaches that said driving means providing during selection of a picture element variable voltages to said picture element prior to applying a fixed voltage to the display device (Col. 4, Ln. 8-18, FIG. 3e).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Loxley et al.** and **Sterling et al.** teachings of a display comprising the first and the second electro-conductive fluid with **Zimmermann** teaching of said driving means providing during selection of a picture element variable voltages to said picture element prior to applying a fixed voltage to the display device in order to benefit of improving image quality by having a display comprising the first and the second electro-conductive fluid and said driving means providing during selection of a picture element variable voltages to said picture element prior to applying a fixed voltage to the display device.

Regarding Claim 2, (Currently amended) **Loxley et al.** teach the display device according to claim 1 comprising the fluids within a space between a first transparent support plate and a second support plate (Col. 5, Ln. 58-68, Col. 6, Ln. 1-12, FIG. 1).

Regarding Claim 3, (Currently amended) **Zimmermann** teaches the display device according to claim 1 in which the variable voltages comprise a set of alternating voltages having a mean value substantially equal to a non-zero voltage associated with an electro-optical state of the picture element to be set (Col. 2, Ln. 1-10, Col. 4, Ln. 8-18, FIG. 3e).

Regarding Claim 18, (New) **Loxley et al.** teach the display device according to claim 1 wherein the variable voltage includes one of the first and second extreme states (Col. 5, Ln. 44-68, Col. 6, Ln. 1-12, FIGs. 1 & 2).

Regarding Claim 19, (New) **Loxley et al.** teach the display device according to claim 1 wherein the variable voltage includes both of the first and second extreme states (FIGs. 1, 2, & 7) because obviously a predetermined voltage would attract substantially half of the particles toward each electrode.

Regarding Claim 20, (New) **Loxley et al.** teach the display device according to claim 1 wherein the variable voltage transitions between the first and second extreme states (FIGs. 1 & 2) because the variable voltage transitions obviously must occur to switch between the extreme states.

Response to Arguments/Remark

3. Applicant's arguments, see Pages 9-10 filed 02/12/2009, with respect to Restriction have been fully considered and are NOT persuasive.

First of all, applicant argued that there was no burden to the Examiner after Restriction/Election which the Examiner clearly explained that it was a burden to the Examiner (see Non-Final Action).

Secondly after the Non-Final Action, applicant argues that there is *unity of invention* between Claims 1 and 15. However, the Examiner respectfully disagrees because *unity of invention* is defined as "*special technical features*" which is not present in both Claims 1 and 15. The "driving means" are not "*special technical features*" that has no relationship between Claims 1 and 15. Furthermore, driving means are well-known in the art and exist in every display.

4. Applicant's arguments, see Page 11 filed 02/12/2009, with respect to *Double Patenting* have been fully considered and are NOT persuasive because no Terminal Disclaimer has been filed.

5. Applicant's arguments with respect to *Claims 1-3* have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH T. LAM whose telephone number is (571)270-3704. The examiner can normally be reached on M-F (7:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VTL/

/Amare Mengistu/
Supervisory Patent Examiner, Art Unit 2629